



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,005	08/15/2006	Peter Marten Van Der Horst	ACM3029PIUS	8565
27624	7590	09/29/2009		
AKZO NOBEL INC. LEGAL & IP 120 WHITE PLAINS ROAD, SUITE 300 TARRYTOWN, NY 10591			EXAMINER CORDRAY, DENNIS R	
			ART UNIT 1791	PAPER NUMBER
			NOTIFICATION DATE 09/29/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

IPANLPATENT@AKZONOBEL.COM

Office Action Summary

Application No.

10/584,005

Applicant(s)

VAN DER HORST, PETER
MARTEN

Examiner

DENNIS CORDRAY

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/3/2009, 9/11/2009 and 9/15/2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,8,9,12 and 13 is/are pending in the application.
- 4a) Of the above claim(s) 12 and 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,8 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1,2,5,8,9,12 and 13 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/11/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Supplemental Amendment

1. The supplemental reply filed on 9/15/2009 was not entered because supplemental replies are not entered as a matter of right except as provided in 37 CFR 1.111(a)(2)(ii).

The amendment is not limited to the following categories as listed in 37 CFR

1.111(a)(2):

- (A) Cancellation of a claim(s);
- (B) Adoption of the examiner suggestion(s);
- (C) Placement of the application in condition for allowance;
- (D) Reply to an Office requirement made after the first reply was filed;
- (E) Correction of informalities (e.g., typographical errors); or
- (F) Simplification of issues for appeal.

The amendment, which adds new limitations to the independent claims, changes the dependency of claims 12 and 13 (newly added in the amendment submitted 6/3/2009), and which presents new claims, was clearly submitted in an attempt to avert:

1) an as yet unmade restriction requirement between the previously examined claims and claims 12 and 13; and

2) an as yet unmade rejection over JP 2002-201202 A, which was provided by the Applicant along with a machine translation thereof on an IDS filed 9/11/2009.

The claims submitted 6/3/2009 will be considered, subject to the restriction requirement below.

Election/Restrictions

2. Newly submitted claims 12 and 13 are directed to an invention that lacks unity with the invention originally claimed for the following reasons:

The originally claimed invention, claim(s) 1, 5, 8 and 9, is drawn to a composition. The invention of claims 12 and is drawn to a method of making paper. The special technical feature common to the inventions is a water soluble cellulose ether having a DS of quaternary ammonium groups of between 0.01 and 0.7, a DS of carboxymethyl groups (CMC) of between 0.05 and 1.0, and a net charge in the range from -0.7 to -0.04, with the proviso that the cellulose ether is not a hydroxyethyl cellulose. The claimed cellulose ether is disclosed in JP 2002-201202 A, which was provided by the Applicant along with a machine translation thereof on an IDS filed 9/11/2009 (see pars 11, 15, 19, 20 and 23-26). The reference does not disclose the water solubility of the cationized carboxymethyl cellulose. However, the structure is the same as claimed and the disclosed cationized carboxymethyl cellulose will have the same properties (e.g.- water solubility) as the claimed cellulose ether.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 12 and 13 are withdrawn from consideration as being directed to a nonelected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Response to Arguments

3. Applicant's arguments and amendments filed 6/3/2009 have overcome the following rejections:

Claims 1 and 2 under 35 U.S.C. 102(b) over Solarek et al for the reasons stated on p 6;

Claims 1, 3 and 4 under 35 U.S.C. 102(b) over Zeuner et al for the reasons stated on pp 6-7.

Claims 1, 3 and 4 under 35 U.S.C. 102(b) or under 35 U.S.C. 103(a) over Cash et al for the reasons stated on pp 7-8.

Claims 2 and 5-11 under 35 U.S.C. 103(a) over Cash et al in view of others for the reasons stated on pp 7-8.

Claims 1-4, 6 and 7 on the ground of nonstatutory obviousness-type double patenting over claims 1-6, 8, 18 and 20 of copending Application No. 11/018915 in view of Stober et al and Zeuner et al for the reasons stated on p 10.

4. The provisional nonstatutory obviousness-type double patenting rejection of Claims 1-4, 6 and 7 over claims 1-6, 8 and 15 of copending Application No. 11/149613 in view of Stober et al is maintained.

In addition, new grounds of rejection are made based on JP 2002-201202 A, which was provided by the Applicant along with a machine translation thereof on an IDS filed 9/11/2009.

5. Applicant's arguments regarding the reference Stober et al have been fully considered but they are not persuasive.

Applicant argues that Stober et al teaches a DS of 0.046 and 0.042. The indicated DS is of quaternary nitrogen groups, not a net charge. For the product summarized in Table 10, Stober et al uses a CMC, which contains carboxymethyl groups. As discussed in the rejections, the DS of carboxymethyl substituents in CMC is typically from 0.1 to 1.2. Thus, the net charge of the CMC of Stober et al after adding cationic groups is anionic and overlays the claimed range. In addition, Stober et al teaches more generally a method of adding cationic groups having the claimed structure to CMC.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 5, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002-201202 A, which was provided by the Applicant along with a machine translation thereof on an IDS filed 9/11/2009, in view of Smook, (Handbook for Pulp and Paper Technologists). The machine translation of JP 2002-201202 is used herein.

Claims 1 and 2: JP 2002-201202 discloses CMC having a DS of carboxymethyl groups (anionic) from 0.4 to 2.0, preferably from 0.6 to 1.8, and a DS of cationic groups of 0.1 to 1.0, and an overall ratio of cationic DS to anionic DS from 0.01 to 0.5, thus resulting in a net anionic charge that overlays the claimed range (pars 1, 11, 15, 19, 20 and 23-26). The CMC is used as a thickener, a coagulating agent, a flocculating agent, a fixing agent, a dispersion stabilizer, a yield improver for papermaking, as a sizing agent and as an adhesive (pars 1 and 38). Paper comprising the disclosed CMC and having improved tensile strength and Stockigt sizing degree is disclosed (pars 35-37). The CMC is cationized by reacting the uncationized CMC with 3-chloro-2-hydroxypropyl trimethyl ammonium chloride, which results in the claimed quaternary ammonium structures (pars 24-26).

JP 2002-201202 A does not disclose a paper comprising a filler or the solubility of the CMC.

Smook teaches that non-fibrous additives typically added to paper include sizing agents, strength agents and fillers (p 220, Table 15-1).

The art of JP 2002-201202 and Smook is analogous as pertaining to additives used in paper. It would have been obvious to one of ordinary skill in the art to add fillers in the paper of JP 2002-201202 in view of Smook as a typical paper additive. The disclosed CMC has a structure substantially identical to that claimed and will have the claimed water solubility because, where the claimed and prior art apparatus or product are identical or substantially identical in structure or composition, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252,

Art Unit: 1791

1255, 195 USPQ 430, 433 (CCPA 1977). In other words, when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent. Alternatively, the degree of water solubility is not defined in the Specification and is only briefly discussed on p 5, lines 3-5 with respect to improving the water solubility. One of ordinary skill in the art would expect at least some water solubility in the disclosed CMC due to the ionic groups thereon.

Claims 5, 8 and 9: JP 2002-201202 A does not disclose a paper coating composition.

Smook teaches that paper is internally sized (sizing added to the papermaking stock) or surface sized (sizing agent is applied to the surface of the paper) (p 283, left col), which is a form of coating paper. Surface sizing has advantages of optimum control, better retention of additives, reduction of wet end deposits and improved paper quality. It would have been obvious to make a sizing or coating composition comprising the claimed cellulose ether as a typical form for applying a sizing to paper and to obtain the advantages taught by Smook.

Alternatively, Smook teaches that common components of paper coatings include adhesives, thickeners (cellulose derivatives are exemplified) and dispersants (p 288, Table 18-3). The disclosed uses for the CMC of JP 2002-201202 include the functions of the aforementioned components, and it would have been obvious to one of ordinary skill in the art to form a coating composition comprising the claimed cellulose ether as a common additive to such compositions.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-4, 6 and 7 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6, 8 and 15 of copending Application No. 11/149613 in view of Stober et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending claims embody paper containing a filler and CMC having the claimed content of quaternary ammonium groups. The claimed structures would have been obvious to one of ordinary skill in the art over the disclosure of Stober et al. The claimed DS of carboxymethyl groups would have been obvious as typical in the art.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

8. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 9/11/2009 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DENNIS CORDRAY whose telephone number is (571)272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1791

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dennis Cordray/
Examiner, Art Unit 1791

/Eric Hug/
Primary Examiner, Art Unit 1791